

POPULATION TODAY

Vol. 16, No. 5 May 1988

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A new billion coming every decade? (See page 3.)

PRB

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FROM THE EDITOR'S DESK

Here at 777 14th St., one of our duties is answering population information requests from both PRB members and the general public.

Some callers apparently believe that numbers equal data. But population numbers are incomplete without one vital ingredient – the time period covered. In demography, there's no such thing as *data sans date*.

Other seekers go to the opposite, optimistic extreme, on the order of: "What I'd really like is the April 1988 population of metropolitan Timbuktu. But if that figure's not available yet, I can settle for March, I guess."

With population figures as with Instamatic photos, there is inevitably a gap between the moment the data are "snapped" and the moment they come back from the drugstore. Demographers are well accustomed to rat-

tling off the phrase: "The most recent year for which data are available."

For those requiring express service, there are *provisional* data. But they're labeled provisional because early errors may not yet have been caught.

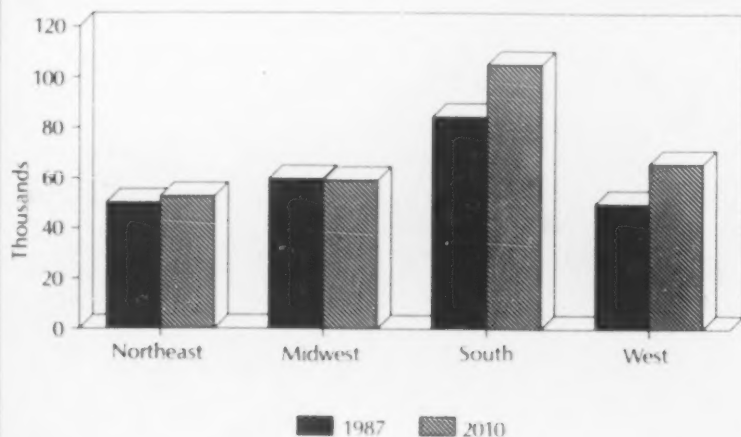
Finally, for the person who can't wait a single microsecond, there are *estimates*. However, they are just that – *estimates*, in which past data are tweaked and adjusted in ways that are thought to compensate for the passage of time.

Beware of data when they're too old – and when they're too new. But in Timbuktu's case, its population in 1963 was a certified 8,735, according to the *Encyclopedia Americana*, and our advice is – please – try to live with this number.

– Art Haupt

SPEAKING GRAPHICALLY

U.S. Regional Populations 1987 and 2010 (Projected)



See also "Take a Number" page 10

Source: U.S. Bureau of the Census

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A Billion More People per Decade?

Global population during the late 1980s may be growing faster than previously expected—a trend with important demographic implications for the future.

The latest *World Population Data Sheet*, published this month, shows that PRB's population estimates for 1988 are diverging somewhat from the level expected in the "medium" series projection of the United Nations Population Division, the most often-cited series.

Thus far, these divergences are small. But they presage greater discrepancies and, if the divergences continue in the coming years, they could, by the early 21st century, result in global numbers billions greater than previously expected.

The Data Sheet, prepared by PRB demographers Carl Haub and Mary M. Kent, shows a mid-1988 global total of 5,128,000,000 people. This approaches the 1988 world total of 5,144,000,000 from the high variant projection series—based on the highest assumptions of fertility—of the UN's most recently published projection series (those for 1984).

The differences in these absolute numbers mean far less than the actual progress of rates, in particular the total fertility rate (TFR), or average number of children per woman. TFR decline has been slower in India than had been anticipated earlier in the decade. And China's birth rate rose unexpectedly in 1986 and stayed up in 1987. Their large populations have kept the world's growth rate at about 1.7 percent rather than 1.6 as projected.

So far all the Data Sheet figures can suggest is something we should have known all along. As time passes, many countries will follow the demographic path set out for them, but some, perhaps many, will not. To date, the data reflect that, worldwide, fertility is not declining as quickly as projected and that world demographic trends are showing a tendency to conform more to the UN's "high" series projections.

PRB's Data Sheet incorporates information on recent fertility and mortality trends as it becomes available. And what is happening is that fertility levels

in some countries are not declining in the tidy, smoothly curved way many projections supposed they would. In particular, in a number of major less developed countries, fertility has leveled off or actually risen.

This means that close to a billion people per decade could be added to earth's population over the next few decades.

Status Report

Here is where demographic measures stand among the world's nations:

The MDCs (more developed countries), which contain 23 percent of world population, remain almost static. The fertility of the MDCs (defined geographically as being the countries of Europe, North America, Japan, Australia, and New Zealand) remains very low. 0.6 percent rate of natural increase, a TFR of 1.9. While there are some changes in individual countries (fertility is up slightly in West Germany and the USSR, and the same or down in others), the net effect is nil. No surprises here.

Data Sheet Highlights

- World population now stands at 5,128,000,000 as of July 1988.
- Humanity is increasing at 1.7 percent a year, basically the same as in the early 1980s. If this rate were to continue unchanged, world population would double by 2022. (It is presently double what it was in 1950.)
- About 1.55 billion people will be born during the next decade, while 0.5 billion people will die, for a net gain of approximately a billion.
- The less developed countries (LDCs) contain 3.9 billion people (77 percent of global population). The more developed countries (MDCs) contain 1.2 billion (23 percent).
- Women around the world are having an average of 3.6 children during their lifetime (total fertility rate).
- Of 142 LDC countries for which information is available, 68 feel that their birth rate is too high.

Several population giants, specifically China, India, and Pakistan, show fertility decline stalled or even reversed. Because its great size overwhelms world statistics, China (whose birth rate has increased since 1985) was primarily responsible for an increase in the world's overall birth rate in recent years. India, the world's second largest country, has probably seen only a slight decline in birth rates. Fertility there is running above the UN estimates, as is the case in Pakistan.

Many African countries show high—in some cases increasing—fertility that is contributing to the stall in world fertility decline. There is little evidence that birth rates are declining in Nigeria, for example, or Ethiopia, not to mention the many smaller high-fertility African countries such as Somalia or Rwanda (the latter sharing with North Yemen the world's highest national TFR, 8.5). Kenya, which still has the highest crude birth rate, shows no documented evidence of falling birth rates. In most of these countries, modern contraception is employed by less than 10 percent of the married women of reproductive age; in many African countries, less than 1 percent use effective family planning.

Numerous LDCs (less developed countries) have, by contrast, managed to lower their growth rates, including some whose fertility decline had previously been thought to have stalled. Many of these tend to be countries making the most economic headway as well. These are the "NICs," or Newly Industrialized Countries (a fashionable if ambiguous term describing a group of LDCs which are rapidly changing into highly urban, industrialized states with rapid economic growth).

Indonesia is the largest country to have registered significant declines in recent years, but Brazil, Mexico, Venezuela, South Korea, Sri Lanka, and Taiwan are other examples. Modern contraceptive use is high in all of these countries, ranging from over 40 percent of currently married women in Mexico to over 62 percent in Taiwan.

Continued on page 8

Ethnic Strife In USSR

Soviet nationality protests and violence have been in the news in recent months. In early March violence erupted between the Christian Armenians and the Turkic Moslem Azeris in a dispute over a largely Armenian-populated area in the Transcaucasian republic of Azerbaydzhán.

While the disputed area is tiny, these events are of greater significance when seen in the context of Gorbachev's policy of Glasnost. Because the events are taking place in the current atmosphere of greater tolerance for public expression and political reform, some Western observers believe that Glasnost is being threatened together with the future of East-West relations. Communist Party conservatives, already nervous about the new policy, may see this as verification of their fears: liberalization leads to civil disobedience and social unrest.

All of this is taking place in Transcaucasia, a southwestern area of Soviet Union (see map on page 8). The Armenian republic had a 1979 population of 3 million, 94 percent of whom are Armenians. The Azerbaydzhán republic had a 1979 population of 6 million, 78 percent of whom are Azeri.

To put the conflict into the context of the 100-plus ethnic groups that make up the Soviet Union, the Armenians and Azeris are relatively small, comprising 1.6 percent and 2.1 percent respectively of the national population.

At issue is the autonomous region of Nagorno-Karabakh, a 1,740 square mile area located in Azerbaydzhán about 10 miles from the Armenian border.

Slightly smaller than Delaware, this is a dry mountainous region of rich farmland with a population of 170,000, 81 percent of whom are Armenian. As a region within Azerbaydzhán, Nagorno-Karabakh is governed by Azeris. Armenians argue that since 1923, when the current borders were drawn, they have experienced ethnic discrimination and are being driven out of Nagorno-Karabakh. Their chief complaints are that Armenian language is not used in schools; radio and television broadcasts cannot be received from Armenia; newspapers and publications

Continued on page 8

Countdown to 1990 Census

In late March — just before census questions were to be submitted to Congress — the Census Bureau and the White House's Office of Management and Budget (OMB) announced final agreement on the questionnaire content and sample size to be used in the 1990 Census. This move apparently resolved the dispute over the decennial census that blew up in fall 1987, to considerable surprise and controversy among the population community (see *PT*, October and November 1987).

Last year OMB had blocked the Census Bureau's original questions and sampling proposal for 1990, with the stated intent of easing respondent burden.

The long census form with some 60 questions that covers a sample population will now be sent to 17.7 million households — a reduction from 1980 sampling rates, but still about one in every six households. The long census form is estimated to take a respondent 30 to 45 minutes to complete, com-

pared to 15 minutes for the short form.

Nevertheless, questions which OMB had originally slated for deletion, such as fertility history, have been preserved. The Bureau appears to have weathered the dispute and can proceed with the census largely in the way it had planned in the first place. Meanwhile, the long-simmering issue of census adjustment continues, even though the Commerce Department decided in October 1987 that the Census Bureau would not adjust the 1990 count to reflect expected differential undercounts in different areas.

Former Census Bureau associate director Barbara Bailar, who resigned in January 1988, has argued that an adjustment is necessary for accuracy, and would not be a revolutionary change of procedure, since the Census Bureau's standard procedures already allow for a certain amount of imputation during the decennial census.

Subjects Planned for 1990 Census

100-percent (short form)

Population

Name
Household relationship
Sex
Race
Age
Marital status
Hispanic origin

Housing

No. units in structure
No. rooms in unit
Tenure
Vacancy characteristics
Congregate housing
Value of owned unit or rent paid

Sample (long form)

Social characteristics

Education — enrollment and attainment
Place of birth, citizenship, and year of entry
Ancestry
Language spoken at home
Migration
Disability
Children ever born
Veteran status

Economic characteristics

Employment and unemployment
Occupation, industry, and class of worker
Place of work and commuting to work
Work experience and income in 1989

Housing

Source of water and method of sewage disposal
Autos, light trucks, and vans
Kitchen facilities
Year structure built
Year moved into residence
No. bedrooms
Farm residence
Shelter costs, including utilities
Condominium status
Plumbing
Telephone
Utilities and fuels

Questions asked in 1980 that are being deleted in 1990

Employment five years ago
Marital history
Weeks spent looking for work
Housing questions on access to the unit, no. of units at address, no. of stories in building, no. of bathrooms, air conditioning and heating equipment, types of water heating and cooking fuel, and presence or absence of elevator

Without question, the 1990 Census will affect the apportionment of the House of Representatives (California, the biggest gainer, is expected to pick up six House seats, for a total of 51). But ironically, adjusting for undercount, were it to occur, would apparently have little or no impact on apportionment for the House of Representatives, according to demographers including PRB's William O'Hare (see note in "Take a Number," *PT*, April 1988). Later on, however, its impact could be significant in apportioning state legislatures and disbursing funds for federal programs.

Meanwhile, census preparation rolls on. Three dress rehearsals for 1990 are being conducted this spring and summer in St. Louis, East Central Missouri, and Eastern Washington. The next step after that: gathering the residential addresses for the computerized master address list used for mailing the forms on Census Day, Sunday, April 1, 1990.

—A.H.

Treasure Trove of China Data

Just off the presses. *The People's Republic of China Population Data Sheet*, a wall chart published jointly by the sociology departments of Peking University and the University of Texas at Austin.

The China Data Sheet provides province-by-province data with 38 columns of figures, including demographic, health, economic, literacy, family planning, and contraceptive information.

These include such measures as the "birth control rate" (this rate was 85.8 percent in 1985 and sums the percentages of married women of fecund age who were contracepting or sterilized, or whose husbands were sterilized) and the "One-Child Certificate Rate" (nationally, this rate was 18 percent of all married fecund women).

The chart measures 22 x 32 inches and is in both English and Chinese. Each one of China's 29 provinces, autonomous regions, and cities is covered, but not Taiwan, Macao, or Hong Kong.

The China Data Sheet costs \$3.00 postpaid per copy (for orders of 10 or more copies, bulk rates are available). To order, contact Dudley I. Poston, Jr., Population Research Center, University of Texas at Austin, Austin, Tex. 78712.

SURVEY REPORT

Morocco

Visits to homes by family planning personnel (trained by the Ministry of Public Health to provide information and contraceptive supplies) are one factor leading to this country's unusually high family planning awareness. Some 98 percent of Moroccan women surveyed know about various methods of contraception.

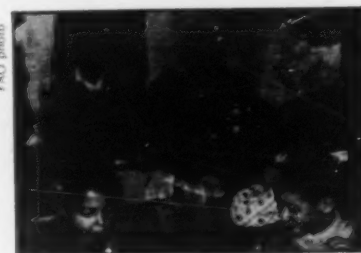
The Demographic and Health Survey in this North African Moslem country found that 59 percent of the currently married women aged 15 to 49 had practiced contraception at some point. However, only 36 percent were contracepting when the survey was taken in the summer of 1987.

The survey also documented a decline in fertility, an important trend in this country of 25 million where 40 percent of the inhabitants are under age 15 and whose current growth rate would result in a doubling of the population in 26 years. The total fertility rate (TFR) over the five years before the survey was 4.9 total children per woman at present fertility rates, down from 5.9 in the 1979-1980 survey, with the greatest drop in births concentrated in the 15-19 age group.

Contraception was more prevalent among women over 30, urban residents, and those who already had 3 or 4 children. It was used twice as much by women with at least a secondary school education as those with less education.

Forty-three percent of those interviewed wanted no more children and 13 percent wanted to wait two years or longer to have another child.

The pill was far and away the most preferred contraceptive: 23 percent of the currently married women were using the pill while 3 percent were practicing the next-most-preferred methods—



Morocco promotes nutrition programs.

traditional withdrawal and the IUD. Although 77 percent of the women knew about female sterilization, only 2 percent had chosen this form of family planning. None of the women had partners who had been sterilized, and only 5 percent were even familiar with vasectomy.

Of the women contracepting, 34 percent received supplies from public health hospitals, centers, and dispensaries and 21 percent were supplied during the home visits sponsored by the Ministry of Public Health, with pharmacies, private clinics, and medical personnel also providing supplies.

Only 38 percent of the children in the survey between 1 and 4 years old had vaccination cards. Over 90 percent of these children had received protection against tuberculosis; almost 90 percent against polio, but less than 85 percent against measles.

The infant mortality rate is still high, 90 deaths per 1,000 births. Twenty-nine percent of the babies under age 5 had had diarrhea in the two weeks preceding the survey. Prenatal care of pregnant women is also deficient.

These figures, which come from a survey sample of 7,000 married women, 15-49, are reported in the revised preliminary report of the Demographic and Health Survey issued by the Ministry of Public Health and Westinghouse's Institute for Resource Development, IRD, of Columbia, Md.

—R.Y.

DEMOGRAPHER'S PAGE

Using Population Data

by Carl Haub and Mary Kent

Each year, the process of readying the statistics of the *World Population Data Sheet* for publication provides the Data Sheet's preparers with a free lesson in the availability of population data. In truth, it may be stretching matters a bit to employ the term "data" when referring to the evidence underlying some population estimates. Many users of the Data Sheet who call to discuss the numbers given for a particular country are surprised – not always pleasantly – to hear how little information can rightly be termed a "given."

The table on the facing page repeats an annual tradition in *PT* of printing the absolute numbers of births, deaths, etc. that lie behind the rates printed on the Data Sheet. But how solid are these numbers, really? Some commentators have suggested that the numbers could be off by some 10 percent, one writer putting the margin of error at 400 million in 1977.¹ No estimate of the margin of error will be ventured here, although there are reasons to think that, if the 400-million figure were reasonable at the time it was posited, improvements in coverage during the 1980s may have reduced it somewhat.

What Is Available?

As would be expected, the more developed countries generally have a monopoly on vital statistics registration considered "complete" and a good track record of census taking. Even in that august group, however, there are some problems.²

Censuses tend to undercount populations – a fact of which the U.S. court system is all too aware. Few developed countries evaluate undercounts and fewer still adjust for them; some coun-

tries have continuous population registers, which can be used to evaluate census results (and vice versa).

One often thinks of birth and death rates reported by developed countries to be truth in digital form – flawless numbers "carved in stone," so to speak. Some cautions prevail even here. In the course of researching the most recent numbers possible, one commonly discovers a different figure in a country's statistical yearbook, a monthly statistical bulletin, or a third-party compendium such as those of the United Nations or the Council of Europe. It may be that one is working with a "provisional" rate, i.e., not yet evaluated for errors. Or it may be a typographical error.

What about timeliness? Most birth and death rates for developed countries are

How solid are the numbers, really?

for 1986. Infant mortality rates (IMR) often lag behind by one year, perhaps because there are relatively few infant deaths and the number of births (the denominator of the infant mortality rate), must also be evaluated. Since the year of reference does vary, it is not, strictly speaking, proper to rank countries on the IMR from the Data Sheet. That can only be done for the last year for which countries actually reported.

Life expectancy is even "worse." Country practices vary even more on the timeliness of the reporting of this headline-grabbing but rather complex statistic.

By now, it should be obvious that if statistics are less than perfect for the more developed countries, estimates for the Third World are even riskier. Some countries have little or no data upon which to base an estimate. Saudi Arabia and North Korea are examples. Some censuses, such as Nigeria's 1973 count, have been deemed unusable. But virtually every country has now taken a census. And survey data from programs

such as the completed World Fertility Survey and the present Demographic and Health Survey have shed much light into some very dark statistical corners.

What Can Be Known?

Even without much of the newly available data, past estimates often were surprisingly good. For example, China's 1982 Census was the first modern count of the world's population giant made available in great detail. Based upon that count and birth and death rates reported since, we estimate that China's mid-1988 population at 1,087,000,000. But how good were estimates for China before the 1982 Census was taken? The United Nations projection for 1988 in the 1980 Assessment was 1,100,606,000, a difference of about 14 million in a country of 1 billion!

Such prescience is not always in evidence, of course. Precensal estimates for Côte d'Ivoire (formerly the Ivory Coast) put the 1975 population at a little under 5 million, but the country's first census, in 1975, counted 2 million more inhabitants, for a total of 6.7 million.

In short, demographic estimates have their limits, a fact that should come as no surprise. We may have a strong feeling that Country X's birth rate has declined in the past few years but lack an actual published estimate. Hopefully, the number that we finally use will be roughly representative of the actual situation. The Data Sheet embodies such an attempt to accurately, or at least reasonably, reflect the "state of the art" in what can be known. And we can hope that as time goes on, the art will continue to become more of a science.

References

1. Eberstadt, Nick, ed., *Fertility Decline in the Less Developed Countries*. New York: Praeger, 1981.
2. Actually, countries judged to have "complete" data (coded as a "C" in the United Nations *Population and Vital Statistics Report*) must only report coverage of 90 percent or better. Most probably are as complete as possible, however.

1988 WORLD POPULATION DATA SHEET

**Estimated mid-1988 Population, Annual Components of Change, Projected
Population Change 1988-2000, and Annual Infant Deaths
(by Region and for 10 Largest Countries in Population)**

Area (country rank in parenthesis)	Population mid-1988	Annual births	Annual deaths	Natural increase	Projected population change, 1988-2000	Infant deaths
WORLD	5,128,139,000	141,415,000	52,190,000	89,225,000	1,049,460,000	10,949,000
MORE DEVELOPED	1,197,529,000	18,062,000	11,140,000	6,923,000	68,838,000	279,000
LESS DEVELOPED	3,930,610,000	123,353,000	41,051,000	82,302,000	980,622,000	10,670,000
LESS DEVELOPED (excluding China)	2,843,610,000	100,482,000	33,442,000	67,041,000	855,622,000	9,657,000
AFRICA	622,531,000	27,605,000	9,284,000	18,322,000	263,815,000	3,033,000
NORTHERN AFRICA	138,409,000	5,393,000	1,484,000	3,909,000	48,877,000	497,000
WESTERN AFRICA	194,117,000	9,026,000	3,435,000	5,592,000	85,118,000	1,127,000
Nigeria (8)	111,904,000	5,170,000	1,925,000	3,245,000	49,026,000	631,000
EASTERN AFRICA	186,095,000	8,997,000	2,868,000	6,130,000	91,595,000	979,000
MIDDLE AFRICA	63,501,000	2,820,000	1,077,000	1,743,000	25,820,000	331,000
SOUTHERN AFRICA	40,409,000	1,368,000	420,000	948,000	12,405,000	98,000
ASIA	2,995,405,000	84,387,000	29,235,000	55,152,000	615,128,000	6,910,000
ASIA (Less China)	1,908,405,000	61,516,000	21,626,000	39,890,000	490,128,000	5,897,000
WESTERN ASIA	123,744,000	4,617,000	1,174,000	3,442,000	45,754,000	410,000
SOUTHERN ASIA	1,136,771,000	40,267,000	15,108,000	25,158,000	311,425,000	4,467,000
Bangladesh (9)	109,471,000	4,740,000	1,817,000	2,923,000	36,329,000	640,000
India (2)	816,828,000	26,629,000	10,292,000	16,337,000	196,452,000	2,769,000
Pakistan (10)	107,467,000	4,643,000	1,558,000	3,084,000	37,799,000	562,000
SOUTHEAST ASIA	432,735,000	13,264,000	4,042,000	9,223,000	109,037,000	959,000
Indonesia (5)	177,427,000	4,861,000	1,774,000	3,087,000	36,266,000	428,000
EAST ASIA	1,302,155,000	26,239,000	8,910,000	17,329,000	148,912,000	1,074,000
China (1)	1,087,000,000	22,870,000	7,609,000	15,261,000	125,000,000	1,013,000
Japan (7)	122,721,000	1,399,000	761,000	638,000	7,299,000	7,000
NORTH AMERICA	272,320,000	4,250,000	2,333,000	1,917,000	24,160,000	42,000
United States (4)	246,104,000	3,864,000	2,141,000	1,723,000	21,851,000	39,000
LATIN AMERICA	429,454,000	12,558,000	3,237,000	9,321,000	107,296,000	719,000
MIDDLE AMERICA	111,372,000	3,573,000	737,000	2,837,000	31,408,000	189,000
CARIBBEAN	32,742,000	846,000	255,000	591,000	5,652,000	51,000
TROPICAL SOUTH AMERICA	237,791,000	7,049,000	1,865,000	5,184,000	62,636,000	445,000
Brazil (6)	144,428,000	4,087,000	1,141,000	2,946,000	35,059,000	258,000
TEMPERATE SOUTH AMERICA	47,549,000	1,089,000	380,000	709,000	7,600,000	34,000
EUROPE	496,765,000	6,419,000	5,125,000	1,294,000	9,730,000	82,000
NORTHERN EUROPE	83,851,000	1,100,000	945,000	156,000	723,000	10,000
WESTERN EUROPE	156,286,000	1,896,000	1,624,000	272,000	491,000	16,000
EASTERN EUROPE	112,813,000	1,697,000	1,286,000	411,000	4,335,000	30,000
SOUTHERN EUROPE	143,815,000	1,726,000	1,270,000	456,000	4,181,000	27,000
USSR (3)	285,917,000	5,690,000	2,773,000	2,916,000	25,083,000	145,000
OCEANIA	25,746,000	507,000	205,000	302,000	4,248,000	18,000

Source. Unpublished printouts used in preparation of the 1988 World Population Data Sheet. Numbers may not add due to independent rounding.

1988 World Data Sheet

Continued from page 3

This year's Data Sheet contains three special columns. The first is the rate of contraceptive use, or prevalence, which shows an impressive range of use of both modern contraceptives and contraception overall.

The second column shows the official government attitude toward its current fertility level (e.g., too high, too low, or satisfactory). The other measure, data availability, represents to what extent population statistics for a country are based upon reliable, recent sources (such as a recent census or official registers). While any country's population can be estimated, this process is obviously made more difficult when the estimate must be calculated by projecting a two-decade-old census on the basis of very sketchy survey results in the interim. By contrast, getting a solid estimate on a country which held a census last year and which also keeps a population register is a relative snap.

The world economy has not grown as rapidly during the 1980s as it has previously. The reasons for this are the subject of debate, but seem to be connected to the various oil shocks of the past decade and a half, as well as economic policies in various countries that have proven less than optimal. Some economists believe that debt owed to MDC lenders may also have contributed to a slowing of economic growth in the Third World.

If economic progress and population growth rates are inversely linked, as has been often posited, the next few years should make clearer whether a decline in population growth rates of various countries can continue in the face of their economic troubles.

—M.K. & A.H.

PRB members receive their copies of the 1988 World Population Data Sheet in the same mailing as this issue of *Population Today*. Additional copies of the Data Sheet can be ordered from the Population Reference Bureau, Inc., Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB. Prices are \$2.00 ea., 2-10 \$1.75 ea., 11-50 \$1.50 ea., over 50, \$1.25 ea. Orders for \$50 or less must be prepaid and include \$1.00 (or 5 percent of order, whichever is greater) for postage and handling.

Soviet Ethnic Strife

Continued from page 3

are not printed in Armenian nor published by Armenians, and economic dependence on Azerbaydzhan has been encouraged by the closing or relocation of factories inside Nagorno-Karabakh.

In February, demonstrations began in Yerevan, the Armenian capital, immediately after the Communist Party Central Committee rejected an appeal for redrawing Armenia's border to include Nagorno-Karabakh. Soviet troops were sent to Yerevan and Nagorno-Karabakh to restore order. Gorbachev personally responded by saying this nationality issue would be examined in the upcoming Central Committee meeting. At Gorbachev's request Armenian activists agreed to a month-long suspension of their activities pending the outcome of the meeting. The following day, riots broke out in Sumgait, an oil and natural gas center in Azerbaydzhan. Official reports said 31 Armenians were killed and 150 others seriously injured.

As foreign journalists are banned from the area indefinitely, there has been no way of verifying the reports, some of which have estimated that hundreds were killed. On March 8, hundreds of thousands of Armenians marched in memory of those killed in Sumgait. As the situation now stands, the party representatives have announced that no border changes will be made but that cultural and economic reforms will be introduced. Although the border issue will be reopened for discussion when the Central Committee meets in June, it is unlikely the Armenian borders will be redrawn to include Nagorno-Karabakh.

It is not widely recognized that the dispute between the Armenians and Azeris

is one that has been brewing for decades and is part of a centuries-long animosity between Armenian and Turkic peoples. Karabakh became a disputed area in the wake of the Russian Revolution after a period of chaos in the Transcaucasus region. Because of an agreement between Turkey and the Soviet Union, Stalin agreed in 1921 to award Karabakh to Azerbaydzhan to gain Turkish support against the West. Turkey's goal was to avoid having a large Armenian state on its eastern border because it just had responded in 1915 to signs of uprising by deporting its Armenian residents from Anatolia. In the process of deportation, about 1 million Armenians were massacred.

The prospect of a border change is unlikely because it would set a precedent for all other ethnic minorities in the Soviet Union. The Moslem nationalities alone account for 18 percent of the total population. Of all the nationalities in the Soviet Union, the Moslem populations, whose fertility has been growing at two to three times the rate of the European populations, most concern the national government. By 2000, some demographers have projected that ethnic Russians who are now 51.5 percent of the Soviet population will become a 49 percent minority.

The recent disturbances also concern the Soviets because the Azeris are primarily Shiite Moslems and the Soviets have long feared the spread of Moslem fundamentalism across the border from Iran and Afghanistan. This threat is somewhat lessened by the fact that with the exception of Azerbaydzhan, most Soviet Moslems are of the more moderate Sunni sect.

—Suzanne Hurley
research demographer



Worldwatch

State of the World 1988, the latest edition of the annual global status report—recently published by the Washington-based Worldwatch Institute—covers the phenomenon of ecological degradation around the world. The shrinking of tropical forests and desertification, the rise in the planet's mean climatic temperature, and the puzzling thinning of the atmosphere's ozone layer all testify to the growing, and so far uncontrolled, impact of a large human population on the ecosystem it so thoroughly inhabits.

The latest edition also points out a troubling relationship between world economic trends in the 1980s and population growth. The external debt of the Third World is now over \$1 billion and increasing by some \$50 billion a year, and, says Worldwatch, has grown beyond all reasonable hope of repayment. Interest payments mean that there is a \$30 billion net capital transfer from the less developed countries (LDCs) to the more developed. In the past, the flow of capital had gone the other way, enhancing economic development in the LDCs.

The result is a vicious circle. "In many heavily indebted Third World nations," says Worldwatch president Lester Brown, "the economic and social progress that normally lowers birth rates has been replaced by falling incomes. As a result, populations continue to grow rapidly, destroying the environmental support systems on which future economic progress depends."

To counter this trend, the report recommends establishment of a "debt retirement fund" financed by the more developed countries with the aim of purchasing LDC debts at their market value in the world's financial exchanges. This would lift some of the debt burden from individual LDCs and at the same time facilitate more debt repayment than would be otherwise likely to occur.

Copies of *State of the World 1988*, by Lester R. Brown et al., are available from Worldwatch Institute postpaid for \$9.95. Contact Worldwatch Institute, 1776 Massachusetts Ave. N.W., Washington, D.C. 20036.

May 1988

SOFTWARE

Facts-at-Your-Fingerlips is a series of Lotus 1-2-3 (version 2.0) spreadsheet data files that contain information on U.S. children, youth, and their families.

After pulling these files up on an IBM PC or compatible, the user can investigate the status of U.S. children and easily massage the data into percentages and indexes, charts, and graphs. One file currently available from the developer, Child Trends, Inc., includes national data on births, birth rates, abortions, nonmarital childbearing, infant mortality, and low birth weight for babies of teenagers and women 20-24. Data are provided for the five-year periods 1960, 1965, 1970, 1975, and single years 1980 through 1985. A

second data set gives cross-sectional adolescent-fertility data by state.

Child Trends, Inc. also plans to release another data set shortly, giving a national demographic profile of U.S. children. This will include a file on all children together; separate files on white, black, and Hispanic children; and a file breaking down data by single year of age.

Prices for this series are: \$15.00 for the first copy of the diskette and \$2.00 for each additional copy. Lotus, or another spreadsheet program capable of processing Lotus 1-2-3 (version 2.0) files, is required. For ordering information write or call Child Trends Inc., 2100 M St. NW, Suite 411, Washington, DC 20037. Phone (202) 223-6288.

—DL

POPULATION UPDATE

Estimated United States Population:

As of January 1, 1988	244,966,000
As of January 1, 1987	242,742,000

The above estimates, the latest available, include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1020.

Estimated World Population:

As of May 1988	5,114,000,000
Annual growth	89,000,000

Estimated by extrapolation from the mid-1988 population on PRB's *World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: December 1987

Item	12 months ending with December					
	Number		Rate			
	1987	1986	1987	1986	1985	1984
Live births	3,829,000	3,731,000	15.7	15.5	15.7	15.7
Deaths	2,127,000	2,099,000	8.7	8.7	8.7	8.7
Natural increase	1,702,000	1,632,000	7.0	6.8	7.0	7.0
Marriages	2,421,000	2,400,000	9.9	10.0	10.2	10.5
Divorces	1,157,000	1,159,000	4.8	4.8	5.0	4.9
Infant deaths	38,000	38,600	10.0	10.4	10.6	10.7
Population base (in millions)			243.4	241.1	238.3	236.1

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source: *Monthly Vital Statistics Report* (Vol. 36, No. 12) from the National Center for Health Statistics.

TAKE A NUMBER

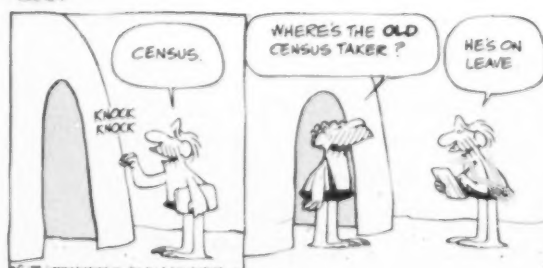
U.S. State Populations from 1987 to 2010, according to U.S. Census Bureau projections released in April 1988. Also see "Speaking Graphically," page 2 of this issue.

U.S. CENSUS BUREAU ESTIMATES AS OF 1988 (numbers in 000s)

State	1987	1988	1989	1990	1995	2000	2010	State	1987	1988	1989	1990	1995	2000	2010
U.S.	243,308	245,529	247,732	249,891	259,619	267,747	282,055	Minn.	4,243	4,271	4,298	4,324	4,426	4,490	4,578
N.E.	50,140	50,278	50,425	50,577	51,293	51,810	52,496	Mo.	5,100	5,132	5,163	5,192	5,304	5,383	5,521
Midw.	59,450	59,574	59,685	59,777	59,867	59,596	59,018	Miss.	2,643	2,661	2,680	2,699	2,792	2,877	3,028
South	84,060	85,133	86,209	87,276	92,366	96,919	104,919	Mont.	814	811	808	805	798	794	794
West	49,658	50,544	51,413	52,261	56,093	59,422	65,622	N.C.	6,422	6,512	6,602	6,690	7,106	7,483	8,154
Alaska	544	554	565	576	636	687	765	N.D.	674	669	664	660	643	629	611
Ala.	4,086	4,119	4,150	4,181	4,307	4,410	4,609	Neb.	1,595	1,593	1,590	1,588	1,574	1,556	1,529
Ark.	2,386	2,400	2,414	2,427	2,482	2,529	2,624	N.H.	1,058	1,088	1,116	1,142	1,251	1,333	1,455
Ariz.	3,432	3,542	3,649	3,752	4,218	4,618	5,319	N.J.	7,687	7,756	7,827	7,899	8,252	8,546	8,980
Cal.	27,531	28,074	28,607	29,126	31,463	33,500	37,347	N.M.	1,518	1,557	1,595	1,632	1,809	1,968	2,248
Colo.	3,308	3,350	3,393	3,434	3,637	3,813	4,098	Nev.	993	1,021	1,049	1,076	1,198	1,303	1,484
Conn.	3,212	3,235	3,257	3,279	3,376	3,445	3,532	N.Y.	17,759	17,755	17,761	17,773	17,886	17,986	18,139
Del.	641	649	658	666	702	734	790	Ohio	10,767	10,779	10,787	10,791	10,742	10,629	10,397
Fla.	11,962	12,249	12,535	12,818	14,189	15,415	17,530	Okla.	3,295	3,288	3,285	3,285	3,318	3,376	3,511
Ga.	6,244	6,384	6,524	6,663	7,338	7,957	9,045	Ore.	2,716	2,733	2,750	2,766	2,828	2,877	2,991
Hawaii	1,081	1,101	1,121	1,141	1,243	1,345	1,559	Pa.	11,874	11,860	11,844	11,827	11,689	11,503	11,134
Ia.	2,826	2,803	2,780	2,758	2,652	2,549	2,382	R.I.	982	989	996	1,002	1,029	1,049	1,085
Idaho	1,006	1,009	1,013	1,017	1,034	1,047	1,079	S.C.	3,420	3,464	3,507	3,549	3,740	3,906	4,205
Ill.	11,569	11,584	11,599	11,612	11,625	11,580	11,495	S.D.	707	707	708	708	711	714	722
Ind.	5,518	5,531	5,542	5,550	5,545	5,502	5,409	Tenn.	4,848	4,891	4,933	4,972	5,135	5,266	5,500
Kan.	2,469	2,477	2,485	2,492	2,515	2,529	2,564	Tex.	16,937	17,192	17,451	17,712	19,012	20,211	22,281
Ky.	3,733	3,738	3,742	3,745	3,745	3,733	3,710	Utah	1,694	1,722	1,750	1,776	1,893	1,991	2,171
La.	4,504	4,507	4,510	4,513	4,517	4,516	4,545	Va.	5,883	5,977	6,068	6,157	6,551	6,877	7,410
Mass.	5,838	5,849	5,863	5,880	5,985	6,087	6,255	Vt.	547	552	557	562	579	591	608
Md.	4,532	4,599	4,665	4,729	5,025	5,274	5,688	Wash.	4,514	4,564	4,612	4,657	4,841	4,991	5,282
Me.	1,184	1,193	1,203	1,212	1,247	1,271	1,308	Wis.	4,791	4,797	4,803	4,808	4,811	4,784	4,713
Mich.	9,191	9,231	9,266	9,293	9,318	9,250	9,097	W.Va.	1,902	1,886	1,871	1,856	1,786	1,722	1,617
								Wyo.	506	505	503	502	495	489	487

ADDENDA

B.C.



BY JOHNNY HART



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CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in *Current Readings*. Publishers may address review copies to Book Review Editor, *POPULATION TODAY*, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

WORK, HEALTH, AND INCOME AMONG THE ELDERLY, edited by

Gary Burtless. Washington, DC: Brookings Institution, 1987. 276 pages. \$26.95 hardback. ISBN 0-8157-1176-0.

The six articles in this volume are original research papers presented at a 1985 conference at the Brookings Institution in Washington and now published in book form. They pose critical policy questions that arise when a population ages: Does higher life expectancy mean that people are healthier and more able to work? Should the age of eligibility for Social Security be raised? What is the relationship between private asset accumulation and the Social Security system? How does the availability of Social Security benefits discourage work?

Three articles on health status of the elderly will be of most interest to demographers. James Poterba and Lawrence Summers ask whether lower mortality results in better or worse health for the surviving elderly. They conclude that average health status, by age, has not changed much despite fears that the "marginal-survivors" would be more frail and despite hopes that factors reducing mortality would also reduce morbidity.

Gary Burtless examines how a retiree's past industrial and occupational pattern affect his health status and mortality. Martin Bailey models optimal retirement age and studies data about health and disability. He agrees with the 1983 legislation increasing the age of eligibility for Social Security, as long as the system also provides for workers who are disabled at younger ages.

The average reader will find most of these papers to be quite technical in both the modeling and the statistical methods used. In many cases, however, the sophisticated techniques cannot compensate for inadequacies in the available data. Thus, the authors cannot definitively answer the questions they pose. But they make valuable contributions to policy issues that are important now and will grow in importance as the U.S. population continues to age.

—Anne D. Williams

MALTHUS, by Donald Winch. *Fast Masters* series. New York: Oxford University Press, 1987. 113 pages. \$18.95 hardback; \$4.95 paper. ISBN 0-19-287653-8.

This excellent analysis of Malthus' thinking acknowledges his "having created the terrain over which demographic dispute continues to rage, forcing those who dislike or disagree with his conclusions to argue over issues which he was the first to dramatize." Donald Winch notes, however, that Malthus' position has "probably generated more vituperation, vilification, and misunderstanding than that of any comparable figure in the history of social and political thought."

The book firmly anchors "Population" Malthus in his time, 1776-1834, and in the swirling philosophical and political arguments about man and society raging after the American and French Revolutions and then the Napoleonic Wars.

A careful delineation of how Malthus' work on the relationship between the growth of population and food supply led to studies of other economic and political factors is equaled by the discussion of the constancy of what the author describes as the "theological utilitarianism" of Thomas Robert Malthus. "There was no conflict

between Malthus the Christian moral philosopher and Malthus the scientist," says Winch, who is Professor of the History of Economics at the University of Sussex in England. Malthus, both a Newtonian scientist and an Anglican cleric, believed that society as well as the physical universe followed natural laws created divinely for the ultimate welfare of humanity. He said that "the science of political economy bears a nearer resemblance to the science of morals and politics than to that of mathematics." He sought the "golden mean," the proper proportions by which the rate of increase in population could be sustained without damaging living conditions, as he later sought stable growth through balancing demand with aggregate supply and capacity to produce.

Winch notes that Malthus wanted to show that the suffering produced by poverty was remediable. "Attempts to foster on to him post-Darwinian notions connected with eugenics, racism, genocide, and sociobiology are frequently a sign of the need to provide our scapegoats with a lineage." As to the "gloom and doom" and harsh social policies popularly associated with "Malthusianism," he also writes that "though our future prospects respecting the mitigation of the evils arising from the principle of population may not be so bright as we could wish, yet they are far from being entirely disheartening, and by no means preclude [the] gradual and progressive improvement in human society."

Winch clearly and concisely describes Malthus' thinking, where he went wrong, and why we can still learn much touching on current concerns from "Population" Malthus.

—Roberta Yared

SPOTLIGHT

AFGHANISTAN

Population (1988 est.): 14.5 million
Land Area: 250,000 sq. mi.
Births per 1,000 pop.: 48
Deaths per 1,000 pop.: 24
Rate of natural increase: 2.4 percent
Total fertility rate: 6.7 children per woman
Infant mortality rate: 183 infant deaths per 1,000 live births
Life expectancy at birth: 39 years
GNP per capita: n.a.
Capital: Kabul

by Judy C. Felt

The Democratic Republic of Afghanistan, surrounded by the Soviet Union, Iran, Pakistan, and China, has an ancient and turbulent history. Often called the "crossroads of central Asia," the landlocked country (with the size and population density of Texas) lies on historic trade and invasion routes. This accident of geography has produced a unique ethnic and linguistic mixture of tribes whose allegiance is primarily to the lineage group.

The principal ethnic group, the Pushtus, make up 40 percent of the population. Afghan Persian (Dari) and Pushtu are the dominant languages. Approximately 98 percent of all Afghans are Moslem and the religion pervades all aspects of daily life.

A constitutional monarchy, established in 1931, was overthrown in a bloodless coup in 1973. In 1978, following a second coup, Afghanistan became a Marxist state, and the Soviet Union invaded the country in 1979. Political and religious opposition to the Marxist regime and the Soviet occupation have kept the country in a state of civil war since then, provoking the emigration of an estimated 5 million refugees—currently living in camps in bordering Pakistan and Iran. As a consequence, the population has fallen in the 1980s.

Afghanistan's fertility levels are estimated to be very high, and its mortality rates are probably among the

highest in the world. Because of the mass emigration which occurred after 1980, however, it is one of the very, very few countries to experience a decline in population between 1980 and 1987 (West Germany is the most notable other such country; most of the others are island nations with small populations.) The extent and timing of the refugees' repatriation will in part determine the population dynamics for the next decade.

Afghanistan's economy is overwhelmingly agricultural. The land is dry and mountainous and half of the cultivated land must be irrigated. In 1979, an estimated 85 percent of the settled population lived in rural areas, using primitive farming techniques. Another estimated 2.5 million are nomads.

The government is committed to

reducing mortality and morbidity. Afghanistan is one of the only countries in which female life expectancy is lower than male, largely because of the low status of women and female children, low levels of medical care, and high fertility. Contraceptives are available and the government is supportive, but family planning services (usually available through health clinics) are inadequate. It is estimated that less than 5 percent of married women of childbearing age are using contraception. Sterilization is illegal and abortion is allowed only to save the life of the mother.

Sources of demographic data are scarce and current estimates are based on a 1972-1974 series of surveys and a 1979 Census which enumerated only 55 to 60 percent of the population. Data on registration of births and deaths are not available; fertility and mortality estimates are based on information available in the 1979 Census. Extrapolation based on these limited data sources produce estimates of undetermined and limited accuracy. The government recognizes the need for better data and has asked for international aid to upgrade data collection and analytic capability.

The USSR has announced it would withdraw its troops from Afghanistan starting May 15, and that all would be out by the new year. This policy change, while peaceable at first glance, still leaves many questions unclear: whether the withdrawal will bring peace between the Kabul government and the rebel factions or merely open a new chapter in the war, when the 5 million refugees outside the country will start to return, and what impact a massive return would have on Afghanistan.

Judy C. Felt is a research demographer at PRB.



Development needs and a long war burden Afghanistan's people.